



Sequence Listing

<110> Joh-E IKEDA  
Kenji YAMAMOTO

<120> APOPTOSIS INHIBITORY PROTEIN, GENE ENCODING THE PROTEIN  
AND CDNA THEREOF

<130> 2003-0980/WMC/00653

<140> 10/628,324

<141> 2003-07-29

<150> 09/705,872

<151> 2000-11-06

<150> 09/239,797

<151> 1999-01-29

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<170> PatentIn Ver. 2.0

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<212> PRT

<213> Homo sapiens

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Gln Leu Ala Lys Glu Leu Glu Glu Glu Gln Lys Glu Arg Ala Lys  
35 40 45  
Met Gln Lys Gly Tyr Asn Ser Gln Met Arg Ser Glu Ala Lys Arg Leu  
50 55 60  
Lys Thr Phe Val Thr Tyr Glu Pro Tyr Ser Ser Trp Ile Pro Gln Glu  
65 70 75 80  
Met Ala Ala Ala Gly Phe Tyr Phe Thr Gly Val Lys Ser Gly Ile Gln  
85 90 95  
Cys Phe Cys Cys Ser Leu Ile Leu Phe Gly Ala Gly Leu Thr Arg Leu  
100 105 110  
Pro Ile Glu Asp His Lys Arg Phe His Pro Asp Cys Gly Phe Leu Leu  
115 120 125  
Asn Lys Asp Val Gly Asn Ile Ala Lys Tyr Asp Ile Arg Val Lys Asn  
130 135 140  
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Ala Arg Leu Ala Ser Phe Arg Asn Trp Pro Phe Tyr Val Gln Gly Ile  
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Ser Pro Cys Val Leu Ser Glu Ala Gly Phe Val Phe Thr Gly Lys Gln  
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Asp Thr Val Gln Cys Phe Ser Cys Gly Gly Cys Leu Gly Asn Trp Glu  
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Glu Gly Asp Asp Pro Trp Lys Glu His Ala Lys Trp Phe Pro Lys Cys  
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225 230 235 240  
Gln Ser Tyr Lys Gly Phe Val Asp Ile Thr Gly Glu His Phe Val Asn  
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Ser Trp Val Gln Arg Glu Leu Pro Met Ala Ser Ala Tyr Cys Asn Asp  
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Ser Ile Phe Ala Tyr Glu Glu Leu Arg Leu Asp Ser Phe Lys Asp Trp  
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Pro	Arg	Glu	Ser	Ala	Val	Gly	Val	Ala	Ala	Leu	Ala	Lys	Ala	Gly	Leu
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 Phe Val Thr Tyr Glu Pro Tyr Ser Ser Trp Ile Pro Gln Glu Met Ala  
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 Cys Ser Leu Ile Leu Phe Gly Ala Gly Leu Thr Arg Leu Pro Ile  
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Cys	Val	Leu	Ser	Glu	Ala	Gly	Phe	Val	Phe	Thr	Gly	Lys	Gln	Asp	Thr	
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gta	cag	tgt	ttt	tcc	tgt	ggg	tgt	tta	gga	aat	tgg	gaa	gaa	gga	921	
Val	Gln	Cys	Phe	Ser	Cys	Gly	Gly	Cys	Leu	Gly	Asn	Trp	Glu	Glu	Gly	
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Asp	Asp	Pro	Trp	Lys	Glu	His	Ala	Lys	Trp	Phe	Pro	Lys	Cys	Glu	Phe	
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Leu	Arg	Ser	Lys	Lys	Ser	Ser	Glu	Glu	Ile	Thr	Gln	Tyr	Ile	Gln	Ser	
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Val	Gln	Arg	Glu	Leu	Pro	Met	Ala	Ser	Ala	Tyr	Cys	Asn	Asp	Ser	Ile	
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Phe	Ala	Tyr	Glu	Glu	Leu	Arg	Leu	Asp	Ser	Phe	Lys	Asp	Trp	Pro	Arg	
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Thr	Ser	Glu	Ser	Asn	Leu	Glu	Asp	Ser	Ile	Ala	Val	Gly	Pro	Ile	Val	
				375					380					385		
cca	gaa	atg	gca	cag	ggg	gaa	gcc	cag	tgg	ttt	caa	gag	gca	aag	aat	1497
Pro	Glu	Met	Ala	Gln	Gly	Glu	Ala	Gln	Trp	Phe	Gln	Glu	Ala	Lys	Asn	
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Glu	Pro	Leu	Val	Leu	Pro	Glu	Val	Phe	Gly	Asn	Leu	Asn	Ser	Val	Met	
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Cys	Val	Glu	Gly	Glu	Ala	Gly	Ser	Gly	Lys	Thr	Val	Leu	Lys	Lys		
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Ile	Ala	Phe	Leu	Trp	Ala	Ser	Gly	Cys	Cys	Pro	Leu	Leu	Asn	Arg	Phe	
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Pro	Ser	Phe	Asp	Asp	Val	Ala	Val	Phe	Lys	Ser	Tyr	Met	Glu	Arg	Leu	
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Phe	Asn	Asp	Asp	Asp	Leu	Ala	Glu	Ala	Gly	Val	Asp	Glu	Asp	Glu	Asp	
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cta	acc	atg	tgc	ttg	atg	agc	aaa	ttt	aca	gcc	cag	aga	cta	aga	cca	2505
Leu	Thr	Met	Cys	Leu	Met	Ser	Lys	Phe	Thr	Ala	Gln	Arg	Leu	Arg	Pro	
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Phe	Tyr	Arg	Phe	Leu	Ser	Pro	Ala	Phe	Gln	Glu	Phe	Leu	Ala	Gly	Met	
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agg	ctg	att	gaa	ctc	ctg	gat	tca	gat	agg	cag	gaa	cat	caa	gat	ttg	2601
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Gly	Leu	Tyr	His	Leu	Lys	Gln	Ile	Asn	Ser	Pro	Met	Met	Thr	Val	Ser	
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gcc	tac	aac	aat	ttt	ttg	aac	tat	gtc	tcc	agc	ctc	cct	tca	aca	aaa	2697
Ala	Tyr	Asn	Asn	Phe	Leu	Asn	Tyr	Val	Ser	Ser	Leu	Pro	Ser	Thr	Lys	
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Ala	Gly	Pro	Lys	Ile	Val	Ser	His	Leu	Leu	His	Leu	Val	Asp	Asn	Lys	
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Glu	Ser	Leu	Glu	Asn	Ile	Ser	Glu	Asn	Asp	Asp	Tyr	Leu	Lys	His	Gln	
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cca	gaa	att	tca	ctg	cag	atg	cag	tta	ctt	agg	gga	ttg	tgg	caa	att	2841
Pro	Glu	Ile	Ser	Leu	Gln	Met	Gln	Leu	Leu	Arg	Gly	Leu	Trp	Gln	Ile	

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Cys Pro Gln Ala Tyr	Phe Ser Met Val Ser Glu His Leu Leu Val Leu				
855	gcc ctg aaa act gct tat	860	caa agc aac act gtt gct gcg tgt tct cca	865	2937
Ala Leu Lys Thr Ala Tyr	Gln Ser Asn Thr Val Ala Ala Cys Ser Pro				
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Asn Leu Gln Tyr Phe Phe	Asp His Pro Glu Ser Leu Ser Leu Leu Arg				
900	agc atc cac ttc cca ata	905	cga gga aat aag aca tca ccc aga gca cat	910	3081
Ser Ile His Phe Pro Ile	Arg Gly Asn Lys Thr Ser Pro Arg Ala His				
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Phe Ser Val Leu Glu Thr	Cys Phe Asp Lys Ser Gln Val Pro Thr Ile				
935	gat cag gac tat gct tct	940	gcc ttt gaa cct atg aat gaa tgg gag cga	945	3177
Asp Gln Asp Tyr Ala Ser	Ala Phe Glu Pro Met Asn Glu Trp Glu Arg				
950	aat tta gct gaa aaa gag	955	gat aat gta aag agc tat atg gat atg cag	960	3225
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965	cgc agg gca tca cca gac	970	ctt agt act ggc tat tgg aaa ctt tct cca	975	3273
Arg Arg Ala Ser Pro Asp	Leu Ser Thr Gly Tyr Trp Lys Leu Ser Pro				
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Val Val Gly Gln Asp Met	Leu Glu Ile Leu Met Thr Val Phe Ser Ala				
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Ser Gln Arg Ile Glu Leu	His Leu Asn His Ser Arg Gly Phe Ile Glu				
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Ser Ile Arg Pro Ala Leu	Glu Leu Ser Lys Ala Ser Val Thr Lys Cys				
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Ser Ile Ser Lys Leu Glu	Leu Ser Ala Ala Glu Gln Glu Leu Leu Leu				
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Thr Leu Pro Ser Leu Glu	Ser Leu Glu Val Ser Gly Thr Ile Gln Ser				
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Gln Asp Gln Ile Phe Pro	Asn Leu Asp Lys Phe Leu Cys Leu Lys Glu				
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Leu Ser Val Asp Leu Glu	Gly Asn Ile Asn Val Phe Ser Val Ile Pro				
1110	gaa gaa ttt cca aac ttc	1115	cac cat atg gag aaa tta ttg atc caa att	1120	3705
Glu Glu Phe Pro Asn Phe	His His Met Glu Lys Leu Leu Ile Gln Ile				
1125	tca gct gag tat gat cct	1130	tcc aaa cta gta aaa tta att caa aat tct	1135	3753
Ser Ala Glu Tyr Asp Pro	Ser Lys Leu Val Lys Leu Ile Gln Asn Ser				
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Pro Asn Leu His Val Phe	His Leu Lys Cys Asn Phe Phe Ser Asp Phe				
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Gly Ser Leu Met Thr Met	Leu Val Ser Cys Lys Lys Leu Thr Glu Ile				
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Ser Trp Leu Leu Asp Ala Asp Asp Ile Ala Leu Leu Asn Val Met Lys  
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Gln Leu Ala Lys Glu Leu Glu Glu Glu Gln Lys Glu Arg Ala Lys  
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Met Gln Lys Gly Tyr Asn Ser Glu Met Arg Ser Glu Ala Lys Arg Leu  
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Lys Thr Phe Val Thr Tyr Glu Pro Tyr Ser Ser Trp Ile Pro Gln Glu  
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Cys Phe Cys Cys Ser Leu Ile Leu Phe Gly Ala Gly Leu Thr Arg Leu  
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Pro Ile Glu Asp His Lys Arg Phe His Pro Asp Cys Gly Phe Leu Leu  
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Thr	Pro	Leu	Phe	Val	Ala	Ala	Ile	Cys	Ala	His	Trp	Phe	Gln	Tyr	Pro
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Gly	Met	Arg	Leu	Ile	Glu	Leu	Leu	Asp	Ser	Asp	Arg	Gln	Glu	His	Gln
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Thr	Lys	Ala	Gly	Pro	Lys	Ile	Val	Ser	His	Leu	Leu	His	Leu	Val	Asp
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gcc	gct	ggg	ttt	tac	ttc	act	ggg	gta	aaa	tct	ggg	att	cag	tgc	ttc	585
Ala	Ala	Gly	Phe	Tyr	Phe	Thr	Gly	Val	Lys	Ser	Gly	Ile	Gln	Cys	Phe	
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tgc	tgt	agc	cta	atc	ctc	ttt	ggt	gcc	ggc	ctc	acg	aga	ctc	ccc	ata	633
Cys	Cys	Ser	Leu	Ile	Leu	Phe	Gly	Ala	Gly	Leu	Thr	Arg	Leu	Pro	Ile	
	100					105					110					
gaa	gac	cac	aag	agg	ttt	cat	cca	gat	tgt	ggg	ttc	ctt	ttg	aac	aag	681
Glu	Asp	His	Lys	Arg	Phe	His	Pro	Asp	Cys	Gly	Phe	Leu	Leu	Asn	Lys	
115				120					125					130		
gat	gtt	ggt	aac	att	gcc	aag	tac	gac	ata	agg	gtg	aag	aat	ctg	aag	729
Asp	Val	Gly	Asn	Ile	Ala	Lys	Tyr	Asp	Ile	Arg	Val	Lys	Asn	Leu	Lys	
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Ser	Arg	Leu	Arg	Gly	Gly	Lys	Met	Arg	Tyr	Gln	Glu	Glu	Glu	Ala	Arg	
		150						155				160				
ctt	gca	tcc	ttc	agg	aac	tgg	cca	ttt	tat	gtc	caa	ggg	ata	tcc	cct	825
Leu	Ala	Ser	Phe	Arg	Asn	Trp	Pro	Phe	Tyr	Val	Gln	Gly	Ile	Ser	Pro	
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Cys	Val	Leu	Ser	Glu	Ala	Gly	Phe	Val	Phe	Thr	Gly	Lys	Gln	Asp	Thr	
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Val	Gln	Cys	Phe	Ser	Cys	Gly	Gly	Cys	Leu	Gly	Asn	Trp	Glu	Glu	Gly	
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Asp	Asp	Pro	Trp	Lys	Glu	His	Ala	Lys	Trp	Phe	Pro	Lys	Cys	Glu	Phe	
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Phe	Ala	Tyr	Glu	Glu	Leu	Arg	Leu	Asp	Ser	Phe	Lys	Asp	Trp	Pro	Arg	
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Glu	Ser	Ala	Val	Gly	Val	Ala	Ala	Leu	Ala	Lys	Ala	Gly	Leu	Phe	Tyr	
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Thr	Ser	Glu	Ser	Asn	Leu	Glu	Asp	Ser	Ile	Ala	Val	Gly	Pro	Ile	Val	
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Pro	Glu	Met	Ala	Gln	Gly	Glu	Ala	Gln	Trp	Phe	Gln	Glu	Ala	Lys	Asn	
390								395					400			
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Leu	Asn	Glu	Gln	Leu	Arg	Ala	Ala	Tyr	Thr	Ser	Ala	Ser	Phe	Arg	His	
405						410						415				
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Met	Ser	Leu	Leu	Asp	Ile	Ser	Ser	Asp	Leu	Ala	Thr	Asp	His	Leu	Leu	
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Gly	Cys	Asp	Leu	Ser	Ile	Ala	Ser	Lys	His	Ile	Ser	Lys	Pro	Val	Gln	
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Glu	Pro	Leu	Val	Leu	Pro	Glu	Val	Phe	Gly	Asn	Leu	Asn	Ser	Val	Met	
455								460						465		
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Cys	Val	Glu	Gly	Glu	Ala	Gly	Ser	Gly	Lys	Thr	Val	Leu	Leu	Lys	Lys	
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Ile	Ala	Phe	Leu	Trp	Ala	Ser	Gly	Cys	Cys	Pro	Leu	Leu	Asn	Arg	Phe	
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Gln	Leu	Val	Phe	Tyr	Leu	Ser	Leu	Ser	Ser	Thr	Arg	Pro	Asp	Glu	Gly	
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Thr	Glu	Met	Cys	Met	Arg	Asn	Ile	Ile	Gln	Gln	Leu	Lys	Asn	Gln	Val	
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Leu	Phe	Leu	Leu	Asp	Asp	Tyr	Lys	Glu	Ile	Cys	Ser	Ile	Pro	Gln	Val	
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att	gct	gtc	cgt	aca	aac	agg	agg	gac	atc	cgc	cga	tac	cta	gag		2073
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Leu	Arg	Lys	Leu	Phe	Ser	His	Asn	Met	Thr	Arg	Leu	Arg	Lys	Phe	Met	
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Ser Leu Arg Asn Lys Ala Thr Ala Glu Ile Leu Lys Ala Thr Val Ser				
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Ser Cys Gly Glu Leu Ala Leu Lys Gly Phe Ser Cys Cys Phe Glu				
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Phe Asn Asp Asp Asp Leu Ala Glu Ala Gly Val Asp Glu Asp Glu Asp				
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Phe Tyr Arg Phe Leu Ser Pro Ala Phe Gln Glu Phe Leu Ala Gly Met				
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Arg Leu Ile Glu Leu Leu Asp Ser Asp Arg Glu His Gln Asp Leu				
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gga ctg tat cat ttg aaa caa atc aac tca ccc atg atg act gta agc				2649
Gly Leu Tyr His Leu Lys Gln Ile Asn Ser Pro Met Met Thr Val Ser				
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Ala Tyr Asn Asn Phe Leu Asn Tyr Val Ser Ser Leu Pro Ser Thr Lys				
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Glu Ser Leu Glu Asn Ile Ser Glu Asn Asp Asp Tyr Leu Lys His Gln				
820	825	830		
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Pro Glu Ile Ser Leu Gln Met Gln Leu Leu Arg Gly Leu Trp Gln Ile				
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Cys Pro Gln Ala Tyr Phe Ser Met Val Ser Glu His Leu Leu Val Leu				
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Ala Leu Lys Thr Ala Tyr Gln Ser Asn Thr Val Ala Ala Cys Ser Pro				
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Phe Val Leu Gln Phe Leu Gln Gly Arg Thr Leu Thr Leu Gly Ala Leu				
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Asn Leu Gln Tyr Phe Phe Asp His Pro Glu Ser Leu Ser Leu Leu Arg				
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agc atc cac ttc cca ata cga gga aat aag aca tca ccc aga gca cat				3081
Ser Ile His Phe Pro Ile Arg Gly Asn Lys Thr Ser Pro Arg Ala His				
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Phe Ser Val Leu Glu Thr Cys Phe Asp Lys Ser Gln Val Pro Thr Ile				
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Asp Gln Asp Tyr Ala Ser Ala Phe Glu Pro Met Asn Glu Trp Glu Arg				
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Asn Leu Ala Glu Lys Glu Asp Asn Val Lys Ser Tyr Met Asp Met Gln				
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Lys Gln Tyr Lys Ile Pro Cys Leu Glu Val Asp Val Asn Asp Ile Asp				
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28

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24